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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/723,451
Filing Date: November 28, 2000
Appellant(s): FUEHRER ET AL.

John R. Brancolini
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/04/2008 appealing from the Office action mailed 01/17/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

Claim 38 stand rejected under 35 U.S.C. 112, first paragraph.

Claim 38 stand rejected under 35 U.S.C. 112, second paragraph.

Claims 1-6, 9-19, 21-23, 25-30, and 33-38 stands rejected under 35 U.S.C. 103(a) over Sun et al., Herbert, and Yorinks et al.. A typographical error was made in omitting claim 38 from the heading of the 103 rejection, although claim 38 was indeed discussed in the body of the rejection. Appropriate correction has been made to the heading.

Claim 20 stands rejected under 35 U.S.C. 203(a) over Sun et al., Herbert, Yorinks et al., and Lowe et al..

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. Patent Number: 6,212,263	Sun et al.	April 03, 2001
U.S. Patent Number: 6,137,392	Herbert	October 24, 2000
U.S. Patent Number: 4,401,955	Yorinks et al.	August 30, 1983
U.S. Patent Number: 5,864,580	Lowe et al.	January 26, 1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim 38 is rejected under 35 U.S.C. 112, first paragraph.

Claim 38 is rejected under 35 U.S.C. 112, second paragraph.

Claims 1-6, 9-19, 21-23, 25-30, and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. in view of Herbert and further in view of Yorinks et al..

Claim 20 is rejected under 35 U.S.C. 203(a) as being unpatentable over Sun et al. in view of Herbert and further in view of Yorinks et al. as applied to claim 1, and further in view of Lowe et al..

These rejections are set forth in a prior Final Office Action, mailed on 01/17/2007 as followed.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 38 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added subject matter of “parasitic capacitor has a capacitance that is as small as possible” to independent claim 38 is considered new matter because the specification as original filed does not provide support for such limitation.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 38 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation “parasitic capacitor has a capacitance that is as small as possible” is not clearly defined the value of the capacitor, indefinite claimed limitations, and the value of the capacitor will vary time to time as a technology is changing.

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-6, 9-16, 18-19, 21-23, 25-30, and 33-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (U.S. Patent No.: 6,212,263, hereinafter, "Sun") in view of Herbert (U.S. patent No.: 6,137,392) and further in view of Yorinks et al. (U.S. patent No.: 4,401,955, hereinafter, "Yorinks").

Regarding claims 1, 21, 30, and 38. Sun teaches an electrical interface (see figure 6), comprising:

a codec that generates two signal paths that together form an input differential pair (see figure 6, codec 418, col.7, ln.5-18),

a primary inductor and a secondary inductor for operable coupling an input differential signal pair to an output differential signal pair (see figure 6, transformer 504, col.7, ln.5-30), and

a filter that attenuates a signal occurring in the output differential signal pair (see figure 6, HPF 512, line diver 510, col.7, ln.25-37).

It should be noticed that Sun fails to clearly teach a parasitic capacitor operable coupled between the primary inductor and the secondary inductor. However, Herbert teaches such features (see figure 3, parasitic capacitor 71, col.4, ln.16-20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Herbert, into view of Sun in order to provide a high degree of noise isolation and safety as suggested by Herbert at col.2, ln.22-25.

Sun and Herbert, in combination, fails to teach the capacitor has a capacitance is in the range of approximately 0.5 pF to approximately 2.5 pF. However, Yorinks teaches such features (see col.5, ln.40-45, col.6, ln.30-35).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Yorinks, into view of Sun and Herbert in order to provide a high degree of noise isolation, safety, and minimize the harmful effects of parasitic reactance as suggested by Yorinks at col.2, ln.49-50.

Regarding claims 2, 22, and 33, Sun further teaches the interface wherein the filter acts as a low pass filter and wherein the electrical interface further includes a high-pass filter, the low-pass filter and the high-pass filter having overlapping cut-off frequencies (see figure 6, low pass filter 500, high pass filter 512, col.7, ln.5-38).

Regarding claims 3 and 34, Sun further teaches the interface wherein the low-pass filter and the high-pass filter together attenuate signals over a frequency range of approximately 50 kHz to approximately 10 MHz (see figure 3).

Regarding claim 4, Sun further teaches the interface wherein the primary inductor is connected between two signal paths forming the input differential signal pair (see figure 6, transformer 504, output differential pairs signals from line driver 502 to the input primary inductor of transformer 504).

Regarding claims 5 and 23, Sun further teaches the interface wherein the primary inductor forms the primary winding of a transformer (see figure 6, transformer 504).

Regarding claims 6 and 35, Sun further teaches the interface wherein the secondary inductor is connected between two signal paths forming the output differential signal pair and wherein the secondary inductor forms the secondary winding of the transformer (see figure 6, transformer 504, secondary inductor, differential output at POTS line 202).

Regarding claims 9 and 25, Sun further teaches the interface wherein the filter includes an output attenuation element for operable coupling a signal path of the output differential signal pair to ground (see figure 6, LPF 500, driver 502, connected to ground).

Regarding claims 10 and 26, Sun further teaches the interface wherein the output attenuation element includes a resistor and a capacitor connected in parallel (see figure 6, HPF). It is inherently that the HPF should be including a resistor and a capacitor.

Regarding claims 11 and 27, Sun further teaches the interface wherein the output attenuation element forms a low-pass filter (see figure 6, LPF 504).

Regarding claims 12 and 28, Sun further teaches the interface further including an input attenuation element operable coupled to at least one of the signal paths forming the input differential signal pair (see figure 6, input at codec 418).

Regarding claim 13 and 29, Sun further teaches the interface wherein the input attenuation element includes a resistor and a capacitor connected in series (see figure 6, high pass filter 510, It is inherently that the high pass filter should be including a resistor and a capacitor).

Regarding claim 14, Sun further teaches the interface wherein the input attenuation element forms a high-pass filter (see figure 6, HPF 512).

Regarding claim 15, Herbert further teaches the interface wherein the filter attenuates a common mode signal in the output differential signal pair (see col.11, ln.55-60).

Regarding claim 16, Sun further teaches the interface wherein the interface is adapted for being operable coupled between a codec and a digital circuit (see figure 1, processor 100).

Regarding claim 18, Sun further teaches the interface further including an analog front end for operable coupling the codec to a telephone line (see figure 4, codec 418, DSL AFE 420).

Regarding claim 19, Sun further teaches the interface wherein the analog front end includes circuitry for providing power to the codec from the telephone line (see figure 6, codec get the power from telephone line at jack 516).

Regarding claim 36, Sun further teaches the method wherein the filtering step includes the step of attenuating high-frequency signals in the output differential signal pair (see figure 6, HPF 512). It is inherently that the HPF couples to the output, which attenuate the high frequency signals.

Regarding claim 37, Sun further teaches the method further including the step of attenuating low-frequency signals in the input differential signal pair (see figure 5, LPF 500, It is inherently that the LPF couples to the input, which attenuate the low frequency signals).

5. **Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun et al. (U.S. Patent No.: 6,212,263, hereinafter, “Sun”) in view of Herbert (U.S. patent No.: 6,137,392) and further in view of Yorinks et al. (U.S. patent No.: 4,401,955, hereinafter, “Yorinks”) as applied to claim 1 above, and further in view of Lowe et al. (U.S. Patent No.: 5,864,580, hereinafter, “Lowe”).**

Regarding claim 20, Sun, Herbert, and Yorinks, in combination, fails to clearly teach the interface wherein the analog front end includes a shunt regulator. However, Lowe teaches such features (see col.3, ln.50-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Lowe, into view of Sun, Herbert, and Yorinks in order to protect the line side device.

(10) Response to Argument

Regarding the rejection under 35 U.S.C. 112, first paragraph:

In page 5 of the Final Office Action, mailed on 01/17/2007, Examiner is rejected claim 38 under 35 U.S.C. 112, first paragraph with new matter of limitation “parasitic capacitor has a capacitance that is as small as possible” to independent claim 38. However, Appellants’ arguments did not address the first paragraph issue in the Appeal Brief. Therefore, the rejection is still maintained.

Regarding the rejection under 35 U.S.C. 103(a):

In pages 6-7 of the Final Office Action, mailed on 01/17/2007, Examiner is rejected claim 38 under 35 U.S.C. 103(a). Examiner mistakenly do not insert claim 38 under heading of the rejection. However, claim 38 is included in the body of the rejection.

(I) Appellant's first argument:

In page 9 of the Appeal Brief, Appellant argues against the 112, second paragraph rejection, saying that the limitation “parasitic capacitor has a capacitance that is as small as possible” is a positive structural limitation.

In response to appellant's argument, Examiner respectfully disagrees with the appellant's argument. It is importance to note that the limitation “parasitic capacitor has a capacitance that is as small as possible” is not clearly defined the value of the capacitor, indefinite claimed limitations, and the value of the capacitor will vary time to time as the technology is changed. Therefore, the limitation “parasitic capacitor has a capacitance that is as small as possible” is considered that is not a positive structural limitation.

(II) Appellant's second argument:

In pages 6-8 of the Appeal Brief, Appellant argues that Examiner has not established a prima facie case of obviousness to combined Sun in view of Herbert and further in view of Yorinks in claims 1-6, 9-19, 21-23, 25-30, and 33-38, and Appellant also alleges that there is no motivation to combine Sun in view of Herbert and further in view of Yorinks.

In response to appellant's arguments, Examiner respectfully disagrees with the appellant's argument. It appears applicant is attacking individual merits of Sun, Herbert and Yorinks and concludes that there is no impetus to combine them. However, the 103 rejections are considered the combination of references as a whole. One cannot show non-obviousness by attacking references individually. **In re Keller**, 208 USPQ 871 (CCPA 1981). The test for obviousness is not whether features of one reference may be bodily incorporated into the other to produce claimed subject matter but simply what the combination of references makes obvious to

one of ordinary skill in pertinent art. **In re Bozek**, (CCPA) 163 USPQ 545. The question in a rejection for obviousness on a combination of references is what secondary reference would teach one skilled in the art and not whether its structure could be bodily substituted in basic reference structure. **In re Richman**, 165 USPQ 509 (CCPA 1970). In this regard, the intent of Herbert and Yorinks as a secondary teaching is not to combine its structural features into Sun, but rather to use the teaching of Herbert and Yorinks to teach a capacitor has a capacitance in the range of approximately 0.5 pF to approximately 2.5 pF. **In re Rose**, 105 USPQ 237 (CCPA 1955). Changing in size/range is a design choice. One skill in the art should recognize that varying the value of the capacitor is not involving any inventive feature since it is just a matter of routine experiment and engineering choice. **In re Oetiker**, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir.1992). It has been held that a prior art reference must either be in the field of appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention.

In this case, Sun, Herbert, and Yorinks are in the field of appellant's endeavor. Sun teaches interface card which includes xDSL, analog front end and direct access arrangement (see col.3, ln.6-20). Sun also teaches a differential line driver 502 that is coupled to transformer 504. The transformer 504 also provide the voltage for driving the xDSL signal of the interface card (see figure 6, ln.5-18). On the other hand, Herbert teaches a similar transformer that includes the parasitic capacitors which reduce the noise and provide a different voltage to power the communication components or communication devices (see figure 3, col.2, ln.24-25, col.4, ln.16-20). It is clearly seen that one skill in the art should be recognize that to use the Herbert's

transformer to incorporate into the interface card of Sun in order to provide the voltage to drive the xDSL signal. Yorinks teaches high power coaxial transmission line that includes the parasitic capacitance (see col.4, ln.56). Since Sun, Herbert, and Yorinks are related to the same environment of communication system. Therefore, they are the same field of appellant's endeavor. For the sake of argument, even if Herbert and Yorinks are not in the field of appellant's endeavor as alleged by appellant (which Examiner disagrees as set forth above), then Herbert and Yorinks is reasonably pertinent to the particular problem with which the appellant was concerned. Therefore, there is an existing a strong prima facie case of obviousness under 35 U.S.C 103, and proper to combine Sun, Herbert and Yorinks.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to do so found in order to provide a high degree of noise isolation and safety as suggested by Herbert at col.2, ln.22-25. The motivation to do so found in order to provide a high degree of noise isolation, safety, and minimize the harmful effects of parasitic reactance as suggested by Yorinks at col.2, ln.49-50.

(III) Appellant's third argument:

In page 7 of the Appeal Brief, Appellant argues that Examiner has apparently engaged in hindsight reasoning to combine Sun in view of Herbert and further in view of Yorinks.

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, Examiner has established a strong prima facie case of obviousness and provides proper suggestions to combine Sun, Herbert and Yorinks. Therefore, the combination of Sun, Herbert and Yorinks are proper, and it is not hindsight as arguing by Appellant.

(IV) Appellant's fourth argument:

In page 8 of the Appeal Brief, Appellant argues that Herbert teaches away from the claimed invention.

In response to appellant's arguments, Examiner respectfully disagrees with the appellant's argument. Teaching a different way is not considered as teaching away. Herbert teaches a transformer for switched mode power supplied which includes the parasitic capacitor connects between the primary inductor and the second inductor (see figure 3, parasitic capacitor 71, col.4, ln.16-20). It is importance to note that the transformer of Herbert can be use in the electrical interface of the appellant's claimed invention since the parasitic capacitor connects between the primary inductor and the second inductor to reduce the noise in the transformer. Therefore, Herbert is not teaching away from the claimed invention.

(11) Related Proceeding(s) Appendix

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No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/TUAN A PHAM/

Tuan Pham

April 02, 2008

Examiner, Art Unit 2618

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